IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Previously Presented) A method for encoding video signal data for an image block, the method comprising:

receiving a substantially uncompressed image block;

block matching the image block in correspondence with at least one particular reference picture while excluding non-optimal search points in accordance with a comparison of a normalization of the image block pixels against a normalization of the reference picture pixels;

computing motion vectors corresponding to a difference between the image block and the at least one particular reference picture; and

motion compensating the at least one particular reference picture in correspondence with the motion vectors.

2.   (Previously Presented) A method as defined in Claim 1 wherein computing motion vectors comprises:

testing within a search region for displacements within a pre-determined range of offsets relative to the image block while excluding non-optimal search points in accordance with a comparison of a normalization of the image block pixels against a normalization of the reference picture pixels;

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calculating at least one of a sum of the absolute difference, a sum of the square difference, and a mean squared error of each pixel in the image block with a motion compensated reference picture; and

selecting the offset with the lowest calculated sum of the absolute difference, sum of the square difference, or mean squared error as the motion vector.

3.   (Previously Presented) A method as defined in Claim 1 wherein block matching comprises:

storing a normalization of the current picture; and

reusing the stored normalization when the current picture is used as a reference picture for coding another picture.

4.   (Previously Presented) A method as defined in Claim 1 wherein block matching comprises:

storing a normalization of the smallest block size; and

reusing the stored normalization for larger block sizes.

5.   (Previously Presented) A method for processing video signal data for an image block, the method comprising encoding as defined in Claim 1 and decoding, the decoding comprising:

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receiving at least one reference picture index with the data for the image block, each corresponding to a particular reference picture;

retrieving a reference picture corresponding to each of the received at least one reference picture index; and

motion compensating the retrieved reference picture to form a motion compensated reference picture.

6.   (Previously Presented) A method as defined in Claim 5, further comprising adding the motion compensated reference picture to the data for the image block to predict the image block.

7.   (Previously Presented) A method as defined in Claim 6, further comprising storing the predicted image block as a reference picture for future retrieval.

8.   (Previously Presented) A method as defined in Claim 5 wherein the video signal data is streaming video signal data comprising block transform coefficients.

9.   (Previously Presented) A video CODEC comprising a video encoder as defined in Claim 1 and a video decoder for decoding video signal data for an image block and at least one particular reference picture index to predict the image block, the decoder

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comprising a motion compensator having an output for determining a block corresponding to the particular reference picture index.

    10. (Previously Presented) A video CODEC as defined in Claim 9, further comprising a variable length decoder (410) in signal communication with the motion compensator (460) for providing the particular reference picture index to the motion compensator.

    11. (Previously Presented) A video CODEC as defined in Claim 9 wherein the motion compensator is for providing motion compensated reference pictures responsive to the fast search block motion estimator.

    12. (Previously Presented) A video CODEC as defined in Claim 9 wherein the video signal data is streaming video signal data comprising block transform coefficients.

    13. (Previously Presented) A video encoder for encoding video signal data for an image block relative to at least one particular reference picture, the encoder comprising a fast search block motion estimator for providing motion vectors corresponding to the at least one particular reference picture, the motion estimator comprising a fast search block matching portion for performing fast search block matching while excluding non-optimal search points in accordance with a comparison of a normalization of the image block pixels against a

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normalization of the reference picture pixels, the fast search block matching portion having an output responsive to the at least one particular reference picture.

14. (Previously Presented) A video encoder as defined in Claim 13 wherein the fast search block matching portion comprises at least one of a data reuse portion and a successive elimination portion.

15. (Previously Presented) A video encoder as defined in Claim 13 wherein the fast search block matching portion comprises a data reuse portion adapted to store the normalization of the current picture and reuse the stored normalization when the current picture is used as a reference picture for coding another picture.

16. (Previously Presented) A video encoder as defined in Claim 13 wherein the fast search block matching portion comprises a data reuse portion adapted to store the normalization of the smallest block size and reuse the stored normalization for larger block sizes.

17. (Previously Presented) A video encoder as defined in Claim 13 wherein the fast search block matching portion comprises at least one of a sum of the absolute difference calculator, a sum of the square difference calculator, and a mean squared error calculator for performing normalization.

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18.   (Previously Presented) A video encoder as defined in Claim 13, further comprising a reference picture store in signal communication with the fast search block motion estimator for providing the at least one particular reference picture and a corresponding particular reference picture index.

19.   (Previously Presented) A video encoder as defined in Claim 18, further comprising a variable length coder in signal communication with the reference picture store for encoding the particular reference picture index corresponding to the at least one particular reference picture.

20.   (Previously Presented) A video encoder as defined in Claim 13, further comprising a motion compensator in signal communication with the fast search block motion estimator for providing motion compensated reference pictures responsive to the fast search block motion estimator.